

# Clean Air Mercury Rule

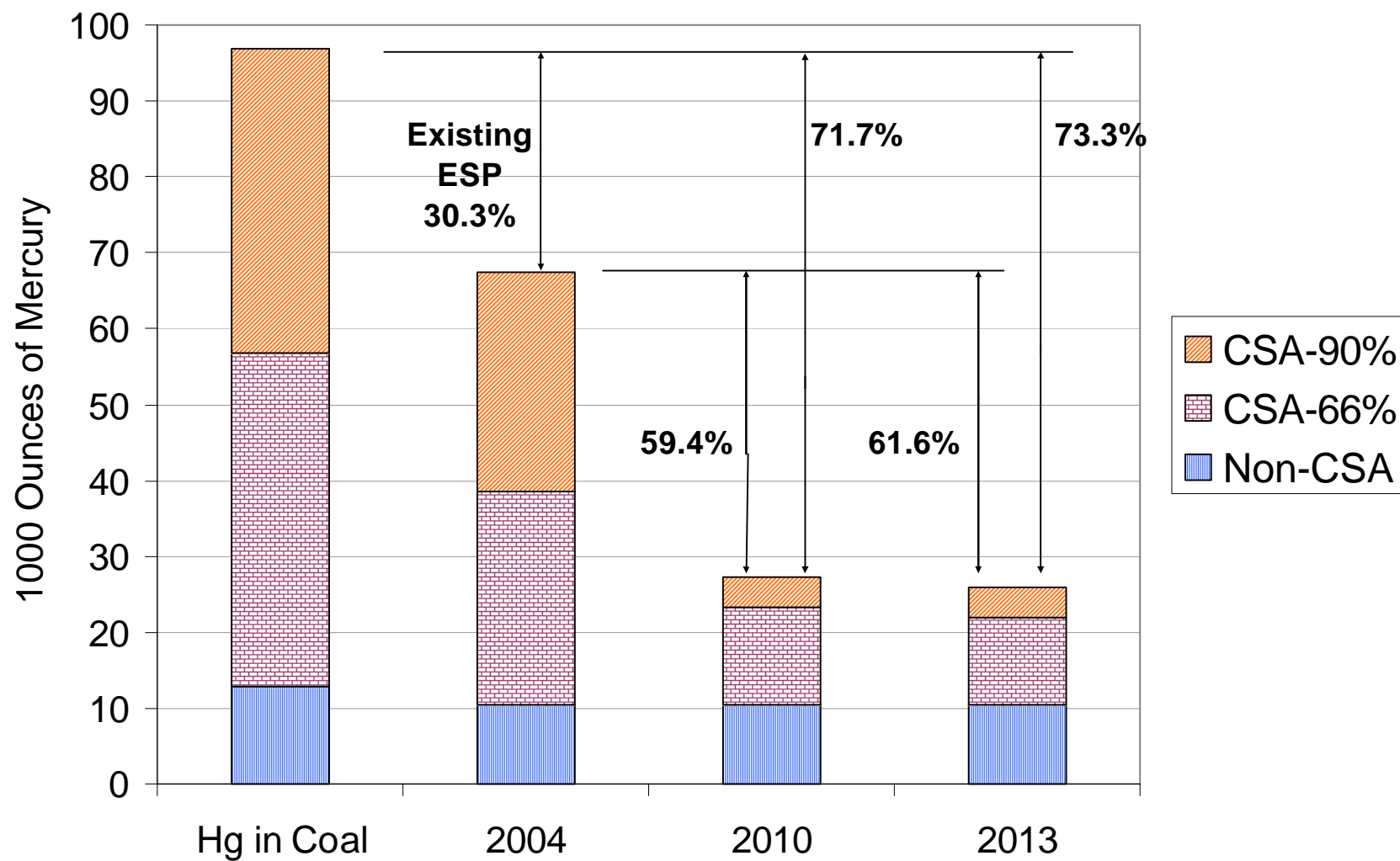
- Issued May 2005 – states have 18 months to submit SIP
- USEPA estimates the federal rule will reduce national mercury emissions by about 20 percent in 2010 and 70 percent in 2018.
- Mercury regulated as a cap and trade program
- USEPA estimates emission reduction by about 20 percent in 2010 and 70 percent in 2018.
- EMC approved draft rule March 2006
- Public hearings held
  - May 25, 2006      Charlotte
  - June 1, 2006      Raleigh
  - June 8, 2006      Winterville.

- North Carolina's Cap
  - Duke & Progress allocated about 33,700 ounces of credits for 2010-2017
  - Duke & Progress allocated about 14,000 ounces of credits for 2018 and beyond
- If annual emissions exceed allocated credits, must purchase credits on national markets
- Floor set for performance of new sources

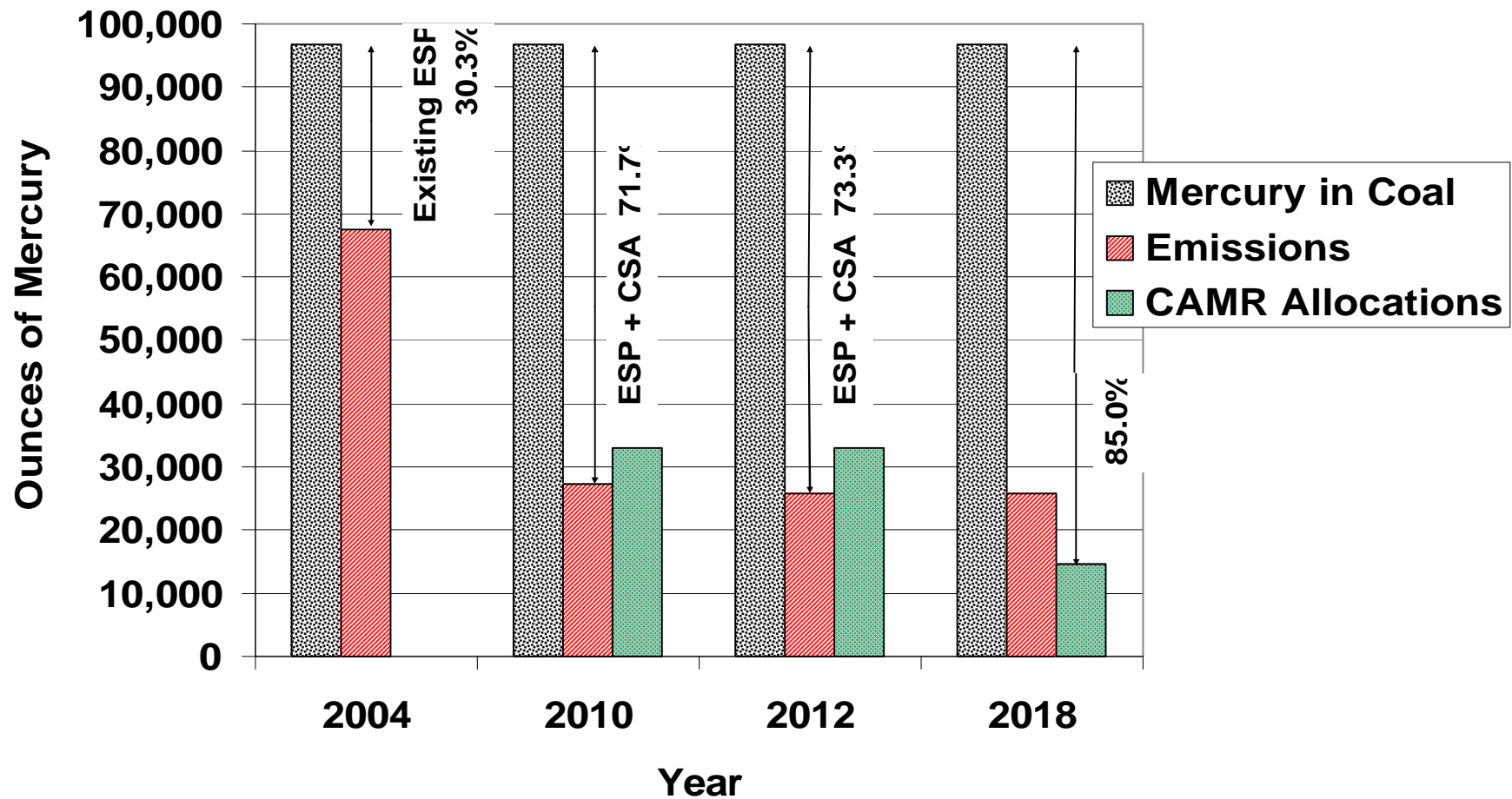
# Issues

- New source performance standard
  - federal or more stringent
- Emission limits for North Carolina
  - federal or more stringent
- Use of national trading program
- Handling growth and new facilities with respect for the cap

## Mercury in Coal and Mercury Emissions

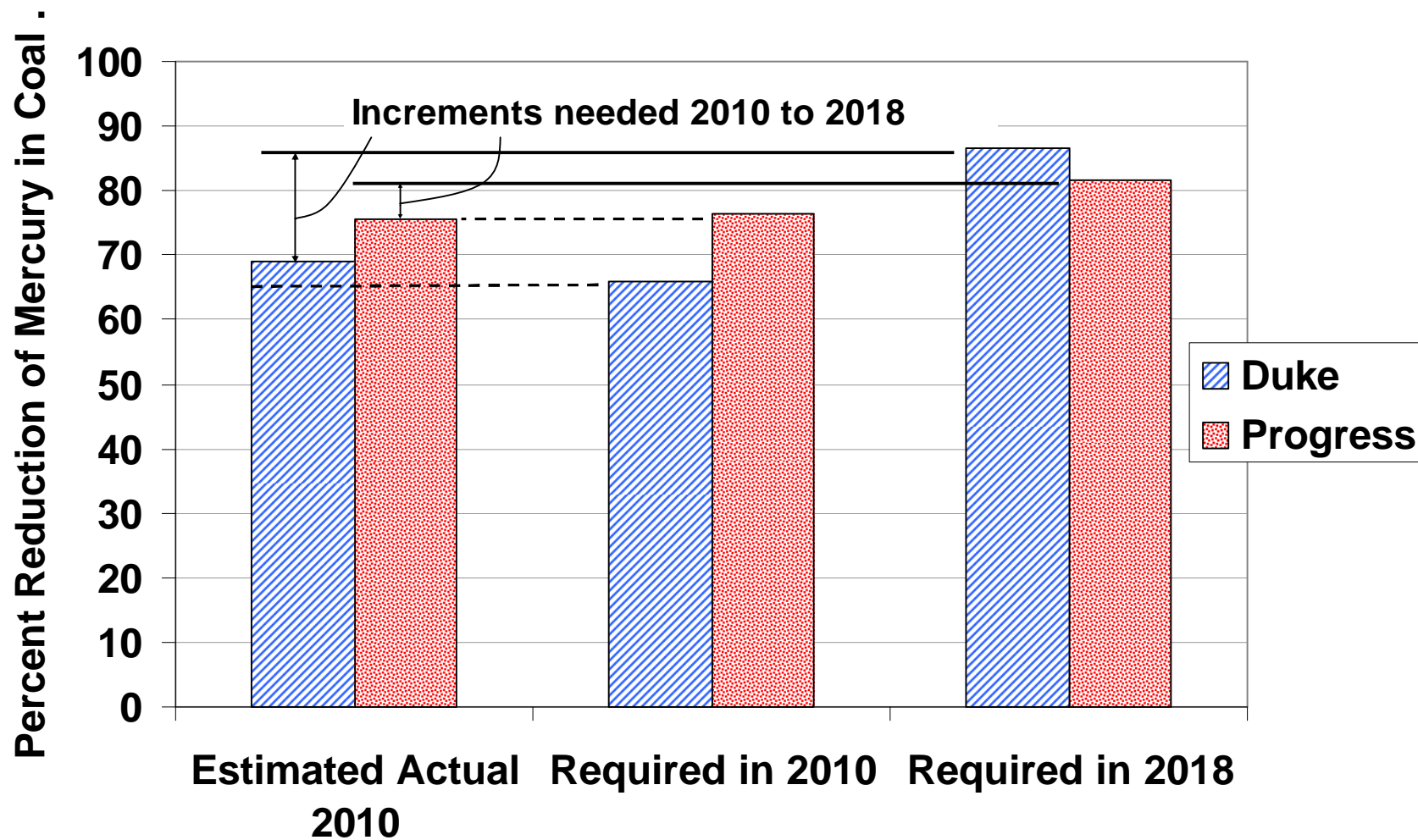


# Mercury in Coal, Mercury Emissions, and CAMR Allocations for Duke Energy and Progress Energy



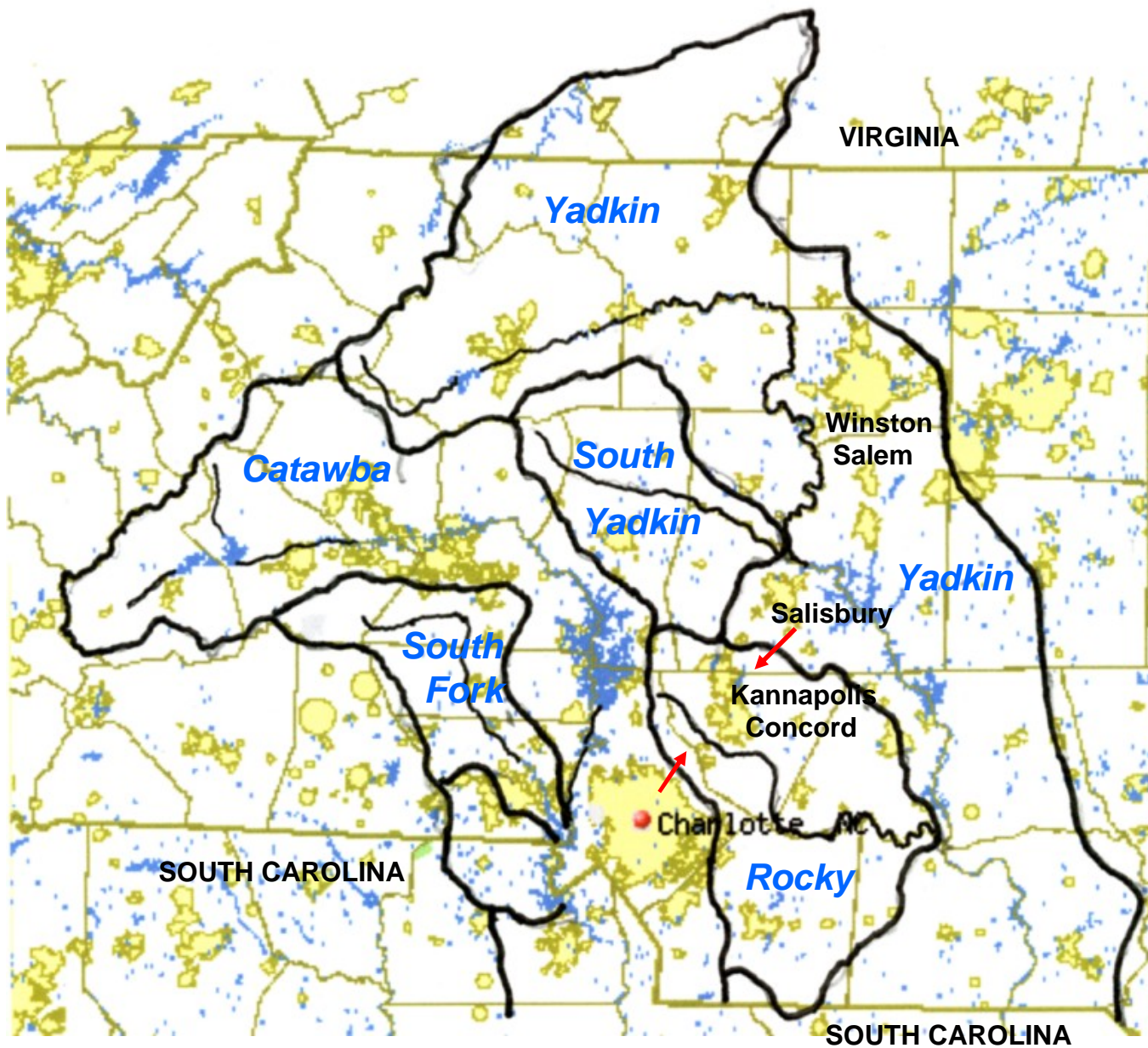
Based on no-growth DAQ spreadsheet

## Reduction Percentages: Estimated and Required to Satisfy CAMR Allowances




Based on no-growth DAQ spreadsheet

# Petition from Kannapolis and Concord for Interbasin Transfers





# Timeline of Process



<b><i>Jan 2007</i></b>	<b><i>Decision on IBT petition by EMC</i></b>
<b><i>Nov-Dec</i></b>	<b><i>EIS revised to address public comments</i></b>
<b><i>Oct 31, 06</i></b>	<b><i>Close of Public Comment Period</i></b>
<b><i>Sept 2006</i></b>	<b><i>Public Meetings held in Valdese and Charlotte</i></b>
<b><i>Aug 31, 06</i></b>	<b><i>EIS Supplement issued to correct errors.</i></b>
<b><i>July 7, 06</i></b>	<b><i>EIS Supplement issued with additional analysis</i></b>
<b><i>May, 06</i></b>	<b><i>Final EIS released and beginning of public review period.</i></b>
<b><i>2005-06</i></b>	<b><i>Additional technical analyses and revisions to the EIS</i></b>
<b><i>Aug 05</i></b>	<b><i>Closing of public comment period on IBT petition and Draft EIS</i></b>
<b><i>June 05</i></b>	<b><i>EMC conducts two public hearings on IBT petition and Draft EIS</i></b>
<b><i>Feb 05</i></b>	<b><i>EMC authorizes proceeding to public hearing</i></b>
<b><i>Nov 04</i></b>	<b><i>Concord and Kannapolis petition EMC to request IBT</i></b>
<b><i>Dec 03</i></b>	<b><i>Draft EIS submitted for DENR review.</i></b>

## Applicable mandatory written findings:

- Necessity, reasonableness, and beneficial effects
- Present and reasonably foreseeable future detrimental effects on the source river basin
- Cumulative effect on source basin
- Detrimental effects on the receiving river basin
- Reasonable alternatives
- Any other facts and circumstances that are reasonably necessary

# Decision Criteria

- A certificate shall be granted ...if the applicant establishes and the Commission concludes by a preponderance of the evidence based upon the findings of fact ...that: (i)
  - benefits of the proposed transfer outweigh the detriments , and
  - (ii) detriments have been or will be mitigated to a reasonable degree.
- Commission may grant the certificate
  - in whole or in part, or deny the certificate.
  - with any conditions attached that the Commission believes are necessary

# Impacts on Donor Basins using the CHEOPS Model

- **I. Elevation Duration Curves** - percentage of time over the period of record that reservoir levels are equaled or exceeded.
- **II. Outflow Duration Curves** percentage of time over the period of record that specified daily average reservoir outflows are equaled or exceeded.
- **III. Elevation Profiles** for the extreme drought of 2001-02 show when the LIP stages were invoked for each of the scenarios.

Figure 2: Elevation Duration Curve for Lake James

Exceedance Curve of Lake James Elevations  
for all Elevations Between Jan 1, 1929 and Dec 31, 2003

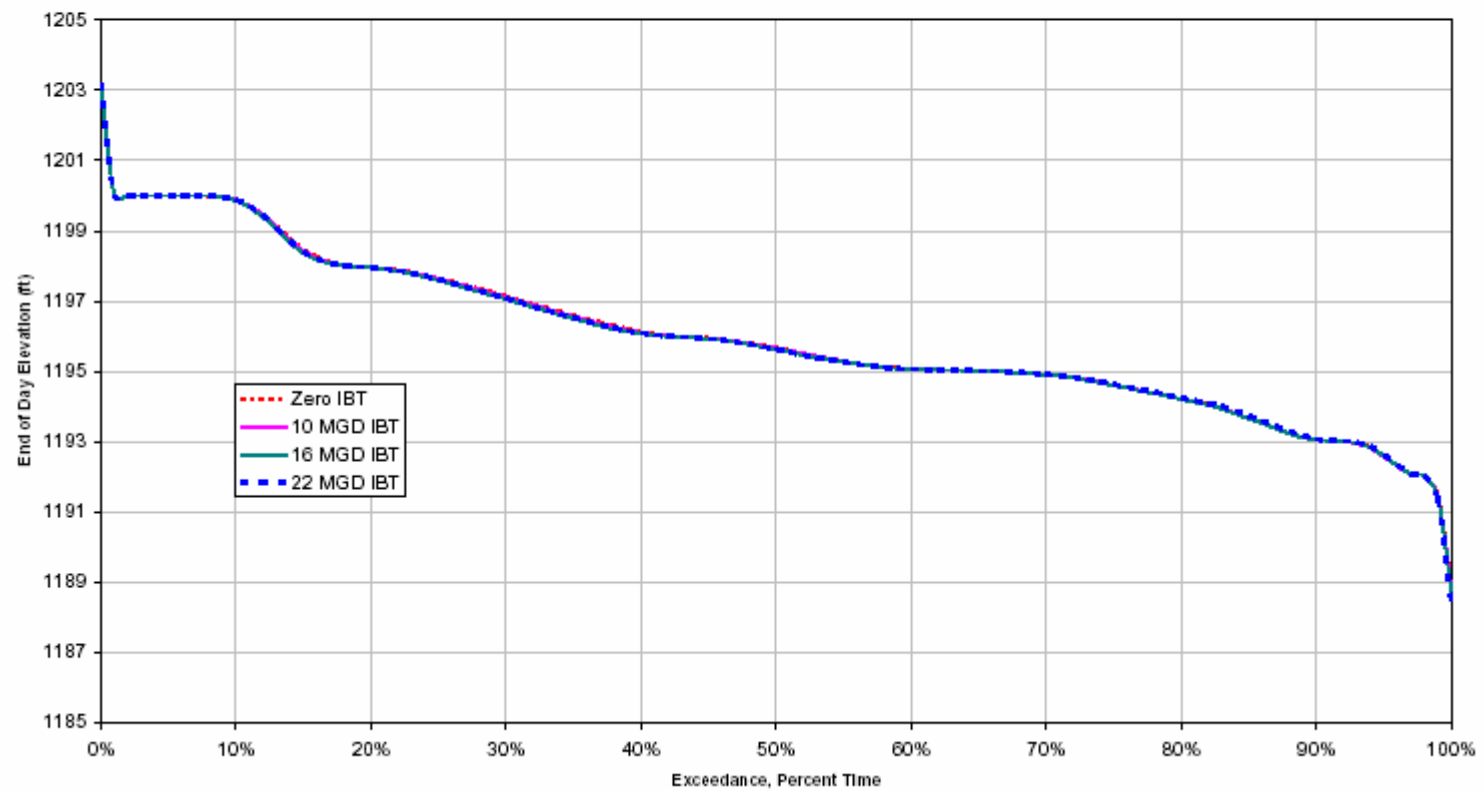
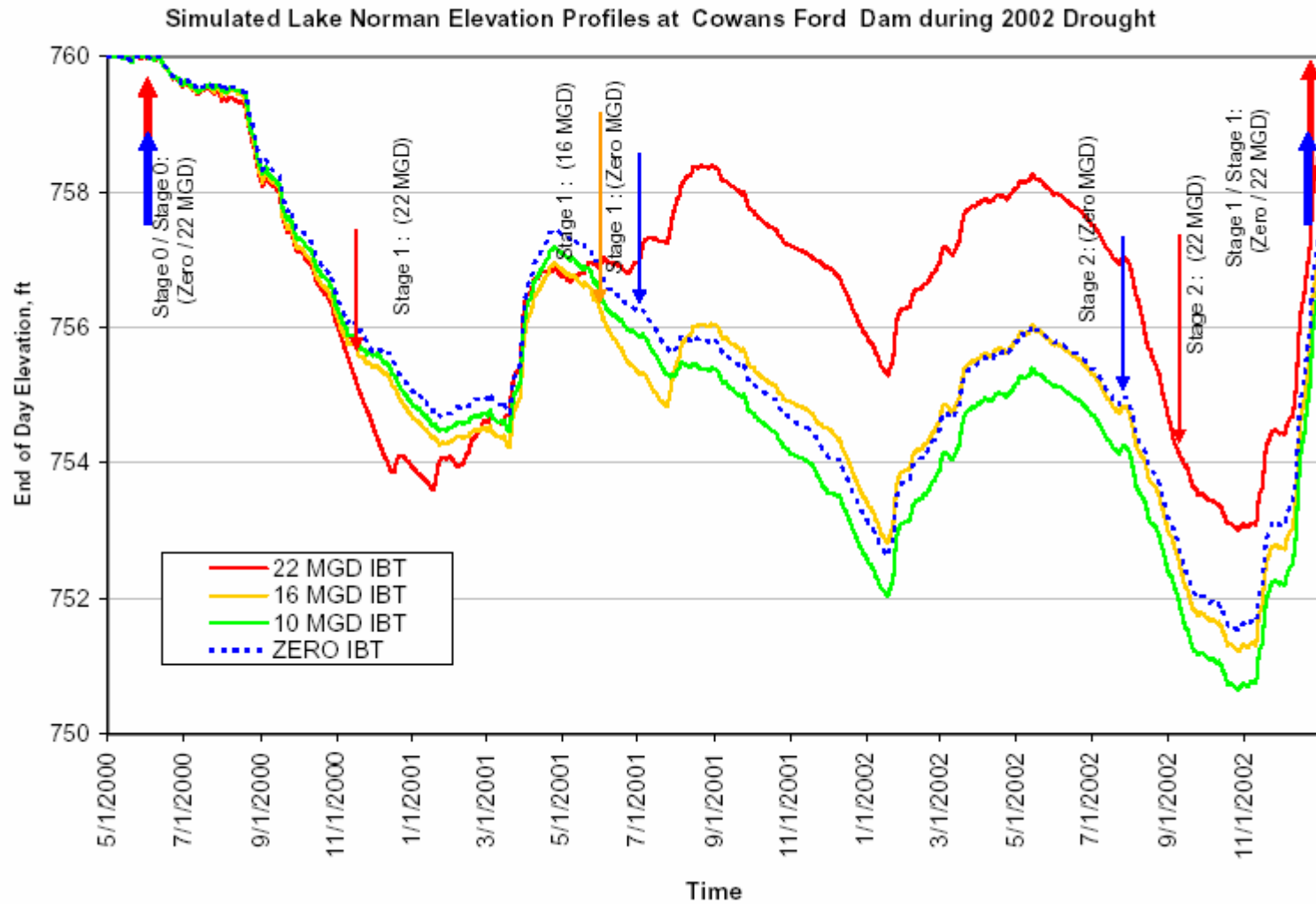


Figure 16: Lake Norman Elevation Profiles during 2002 Drought



# Elevation Effects of IBT only with no inflow for six months

Table S-8.

Reduction in Reservoir Elevations (inches) for Transfers of 10, 16, and 22 MGD						
	10 MGD		16 MGD		22 MGD	
	Initial Storage Conditions					
Reservoir	90% storage	75% storage	90% storage	75% storage	90% storage	75% storage
James	2.1	2.3	2.1	3.7	4.5	5.0
Rhodhiss	1.1	1.2	1.1	1.9	2.4	2.6
Hickory	1.4	1.6	1.4	2.5	3.0	3.5
Lookout Shoals	1.3	1.3	1.3	2.1	2.8	2.9
Norman	1.4	1.7	1.4	2.6	3.1	3.6
Mountain Island	0.9	1.0	0.9	1.6	2.1	2.3